

[Home](#) > [Journal](#) > [Social Sciences & Humanities](#) > [CE](#)
[Indexing](#) [View Papers](#) [Aims & Scope](#) [Editorial Board](#) [Guideline](#) [Article Processing Charges](#)
[CE](#) > [Vol.3 No.6A, October 2012](#)


Evaluation of Innovative Teaching Approaches: The Moderating Effect of Student Prior Experience

PDF (Size: 407KB) PP. 755-760 DOI : 10.4236/ce.2012.326113

Author(s)

Bruce Byrne, Richard Guy

ABSTRACT

The success of creative or innovative teaching approaches is often measured by student perceptual ratings of the learning environment or by academic outcomes. This paper examines student perceptions of a novel human physiology laboratory format and the effect of prior experience on these perceptions. The same undergraduate human physiology course, taught at second year level, was taken by students who had previously completed a semester of human physiology ('continuing' students) and by those taking it for the first time ('new' students). The "continuing" students were significantly more positive about the novel format compared to the previous format. The class as a whole ('continuing' plus "new") also gave a strong positive rating of the novel format. However a comparison between the 'continuing' and the "new" students showed that the latter were significantly more positive in their perception of the laboratory in all areas apart from active participation. A correlational analysis indicated strong inter-rater links for the 'continuing' students but weak or non-significant inter-rater correlations for the 'new' students. The study suggests that, given the diversity of student backgrounds and prior experience in a given class, that perceptual ratings of the learning environment alone may not provide enough support for the effectiveness of novel teaching interventions.

KEYWORDS

Perception; Prior Experience; Engagement; Motivation; Active Learning; Undergraduate Students; Confidence

Cite this paper

 Byrne, B. & Guy, R. (2012). Evaluation of Innovative Teaching Approaches: The Moderating Effect of Student Prior Experience. *Creative Education*, 3, 755-760. doi: 10.4236/ce.2012.326113.

References

- [1] Ainley, M. (2006). Connecting with learning: Motivation, affect and cognition in interest processes. *Educational Psychology Review*, 18, 391-405. doi: 10.1007/s10648-006-9033-0
- [2] Artino, A. R. (2009). Online learning: Are subjective perceptions of instructional context related to academic success? *The Internet and Higher Education*, 12, 117-125. doi: 10.1016/j.iheduc.2009.07.003
- [3] Beckman, T. J., Ghosh, A. K., Cook, D. A., Erwin, P. J., & Mandrekar, J. N. (2004). How reliable are assessments of clinical teaching? A review of the published instruments. *Journal of General Internal Medicine*, 19, 971-977. doi: 10.1111/j.1525-1497.2004.40066.x
- [4] Biggs, J. (1985). The role of metalearning in study process. *British Journal of Educational Psychology*, 55, 185-212. doi: 10.1111/j.2044-8279.1985.tb02625.x
- [5] Biggs, J. B. (1989). Approaches to enhancement of tertiary teaching. *Higher Education Research & Development*, 8, 7-25. doi: 10.1080/0729436890080102
- [6] Cassidy, S. (2007). Assessing "inexperienced" students' ability to self-assess: Exploring links with learning style and academic personal control. *Assessment & Evaluation in Higher Education*, 32, 313-330. doi: 10.1080/02602930600896704

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[CE Subscription](#)
[Most popular papers in CE](#)
[About CE News](#)
[Frequently Asked Questions](#)
[Recommend to Peers](#)
[Recommend to Library](#)
[Contact Us](#)

Downloads:	195,609
------------	---------

Visits:	429,371
---------	---------

[Sponsors, Associates, and Links >>](#)

- [The Conference on Information Technology in Education \(CITE 2012\)](#)

- [7] Deci, E. L., & Ryan, R. M. (2000). The " What" and " Why" of Goal Pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11, 227-268. doi: 10.1207/S15327965PLI1104_01
- [8] Diseth, ?, Pallesen, S., Brunborg, G. S., & Larsen, S. (2010). Academic achievement among first semester undergraduate psychology students: The role of course experience, effort, motives and learning strategies. *Higher Education*, 59, 335-352. doi:10.1007/s10734-009-9251-8
- [9] Fazey, D. M. A., & Fazey, J. A. (2001). The potential for autonomy in learning: Perceptions of competence, motivation and locus of control in first-year undergraduate students. *Studies in Higher Education*, 26, 345-361. doi:10.1080/03075070120076309
- [10] Forrest, K. D., & Miller, R. L. (2003). Not another group project: Why good teachers care about bad group experiences. *Teaching of Psychology*, 30, 244-246.
- [11] Fredericks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research*, 74, 59-109. doi:10.3102/00346543074001059
- [12] Handelsman, M. H., Briggs, W. L., Sullivan, N., & Towler, A. (2005). A measure of college student course engagement. *The Journal of Educational Research*, 98, 184-191. doi:10.3200/JOER.98.3.184-192
- [13] Harper, S. R., & Quaye, S. J. (2009). Beyond sameness, with engagement and outcomes for all. In S. R. Harper, & S. J. Quaye (Eds.), *Student Engagement in Higher Education* (pp. 1-15). New York and London: Routledge.
- [14] Hillyard, C., Gillespie, D., & Littig, P. (2010). University students' attitudes about learning in small groups after frequent participation. *Active Learning in Higher Education*, 11, 9-20. doi:10.1177/1469787409355867
- [15] Hoffstein, A., & Lunetta, V. N. (1982). The role of the laboratory in science teaching. *Review of Educational Research*, 52, 201-217.
- [16] Jonassen, D. (1999). Designing constructivist learning environments. In C. M. Reigeluth (Ed.), *Instructional theories and models* (2nd ed., pp. 215-239). Hoboken: Taylor & Francis.
- [17] Kearney, M. (2004). Classroom use of multimedia-supported predictobserve-explain tasks in a social constructivist learning environment. *Research in Science Education*, 34, 427-453. doi:10.1007/s11165-004-8795-y
- [18] Kember, D., Ng, S., Tse, H., Wong, E. T. T., & Pomfret, M. (1996). An examination of the interrelationships between workload, study time, learning approaches and academic outcomes. *Studies in Higher Education*, 21, 347-358. doi:10.1080/03075079612331381261
- [19] Kulic, J. (2001). Student ratings: Validity, utility and controversy. *New Directions for Institutional Research*, 109, 9-25. doi:10.1002/ir.1
- [20] Land, S., & Hannafin, M. (2000). Student centered learning environments. In D. H. L. Jonassen, (Ed.), *Theoretical foundations of learning environments*. Hoboken: Taylor & Francis.
- [21] Langendyk, V. (2006). Not knowing that they do not know: Selfassessment accuracy of third-year medical students. *Medical education*, 40, 173-179. doi:10.1111/j.1365-2929.2005.02372.x
- [22] Lüdtke, O., Trautwein, U., Kunter, M., & Baumert, J. (2006). Reliability and agreement of student ratings of the classroom environment: A reanalysis of TIMSS data. *Learning Environments Research*, 9, 215-230. doi:10.1007/s10984-006-9014-8
- [23] Marton, F., & Booth, S. (1997). *Learning and awareness*. Hoboken, NJ: Taylor & Francis..
- [24] Mayer, R. E. (2003). Theories of learning and their applications to technology. In H. F. P. O' Neil, (Ed.), *Technology applications in education* (pp. 127-157). Hoboken: Taylor & Francis.
- [25] Michael, J. (2006). Where' s the evidence that active learning works? *Advances in Physiology Education*, 30, 159-167. doi:10.1152/advan.00053.2006
- [26] Prince, M. (2004). Does Active Learning Work? A Review of the Research. *Journal of Engineering Education*, 93, 223-231.
- [27] Ramsden, P. (1991). A performance indicator of teaching quality in higher education: The course

experience questionnaire. *Studies in Higher Education*, 16, 129-150.
doi: 10.1080/03075079112331382944

[28] Ramsden, P. (1992). *Learning to teach in higher education*. London: Routledge.
doi: 10.4324/9780203413937

[29] Richardson, J. T. E. (2005). Instruments for obtaining student feedback: A review of the literature. *Assessment & Evaluation in Higher Education*, 30, 387-415. doi: 10.1080/02602930500099193